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was incompetent to compile such statistics," since I assumed that a man who could not quote with accuracy the statistics of another could hardly be expected to compile trustworthy statistics for himself. Now that Professor Bolling calls attention to the fact that his figures are just as bad for the *Odyssey* as they are for the *Iliad*, he must himself feel that in writing that word "impossible" he was using a fairly strong expression. Of course, I am delighted for this added proof of the very thing I wish to establish, namely, that no reliance is to be placed in the statistics given by Croiset.

In arguing from the number 8 for the *Iliad* Professor Bolling is bound to admit that here the word "Iliad" includes Book xxiii, for he cannot find eight examples of this phrase without it, yet his whole defense of Croiset rests on the assumption that when Croiset uses the word "Iliad" that particular book is excluded.

My only answer to such Proteus-like changes of definition has already been given by Socrates, and I cannot improve it. When Crito asked Socrates how he wished to be buried he resented the mental confusion of regarding Socrates' body and Socrates himself as identical things and replied, "Loose definition is not only an error in the thing itself, but it produces also a certain deterioration in the soul."

When teachers and seminaries are busied with finding what a modern writer means by some simple word, when the meaning of "Iliad," "Odyssey," "Antigone," "Herodotus," or the rest must be tested for each particular passage, when we accept 25 and 3 as identical figures with 8 and 1, then our calling is ready for "the dark house and the long sleep."

JOHN A. SCOTT

NORTHWESTERN UNIVERSITY

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#### HERODOTUS AND THE FERTILITY OF BABYLONIA

In a familiar passage in Book i. 193, Herodotus describes the great fertility of Babylonia as follows: "Of all the countries that we know there is none which is so fruitful in grain, for it is so productive as to yield commonly two hundred fold, and when the production is the greatest it even reaches three hundred fold. The blade of the wheat-plant and barley-plant is often four fingers in breadth. As for the millet and sesame, I shall not say to what height they grow, though within my own knowledge, for I am not ignorant, that what I have already written concerning the fruitfulness of Babylonia must seem incredible to those who have never visited the country."

What a productivity of a possible three hundred fold means can be grasped by the fact that in our own country the farmer is satisfied with a twenty fold yield of wheat, and I can find no record of any yield of wheat in the United States which has surpassed sixty fold.

Ancient writers seem to agree with Herodotus in assigning almost fabulous productivity to that land; Theophrastus, a skilled botanist and a competent

observer, says (*Histor. Plant.* viii. 7): "In Babylon the fields are regularly mown twice, then herds are let in to graze thereon so as to keep down the luxurious growth of the plants. When this is done, the return is fifty fold for badly cultivated fields, while in the better cultivated fields the return is one hundred fold." Strabo xvi. 14: "Babylon is the most productive of all lands, for it is said to produce three hundred fold."

An inscription of Assurbanipal claims that grain grew five cubits high, and that the heads were five-sixth of a cubit in length. Quoted by How and Wells to the passage in Herodotus, and the same writers quote Cheney, a modern authority, who says: "The portions which are still cultivated, as around Hillah, show that the region has all the fertility ascribed to it by Herodotus."

Modern Babylonian scholars, in general, look with suspicion on the figures given by Herodotus, Theophrastus, and Strabo, and think these yields are due to a vigorous imagination and to a desire to create wonderment by effective exaggeration. Rogers (*History of Babylonia and Assyria*, I, 420) says: "It is unlikely that in ancient Babylonia the average yield greatly exceeded sixty fold."

It is well known that lower Mesopotamia consists entirely of the silt deposited in the Persian Gulf by the rivers, especially the great Tigris and Euphrates rivers. From Hit to the Persian Gulf, a distance of 550 miles, the country is made exclusively of this rich alluvial soil. Every year these two rivers overflow their banks and spread over the land a layer of fresh fertilizing deposit, and so great is the bulk of this alluvial deposit that, in addition to what is spread over the soil of Mesopotamia, the Persian Gulf is filled in at a rate of three miles per century (Myers, *Dawn of History*, p. 86).

Alluvial soil, although extremely rich in certain plant foods, as a rule is not productive because of a lack of those mineral elements necessary to the hardening and ripening of grains. This alluvial soil of Mesopotamia owes its astounding productivity to something which I have never seen mentioned by any editor or commentator, and this is, to the fact that the Euphrates and the Tigris in their upper courses flow through mountains whose bases are composed of disintegrating limestone. The waters are thus impregnated with lime, and not only deposit the silt which makes the soil, but compound with that soil great quantities of mineral fertilizers. Sir William Willcocks (*Geographical Journal* [1910], p. 10) says: "The waters of the two rivers and the soil of the country are yellow in color. The percentage of lime in the water and soil is as high as fifteen. The chemical analysis of soil and water testify to their richness. The presence of fifteen percentage of lime in the soil renders the reclamation of Babylonia very easy compared with similar work in the dense clays of Egypt."

President Judson assured me that engineers with the British army whom he met in Mesopotamia told him that at a depth of seventy-five feet the soil was as rich and fertile as at the surface—the same alluvial soil all the way.

This alluvial soil and the presence of the lime, but especially the lime, should make one a little slow in doubting the figures given by so careful an observer as Herodotus.

Recently I was in a farming district where lime sifted into the soil from the smoke of nearby plants which manufactured cement, and the fields seemed many fold more productive than the adjoining fields to which the lime did not come. I was told that these fields now produce five times as great harvests as they did before the lime-distributing factories were built. Since visiting this particular region I have studied similar fields and find in every case similar results.

The value of lime to the soil depends largely on the soil itself; the richer the soil, the greater the value. The deep alluvial soil of Mesopotamia is just the proper substance to absorb and to profit from such a high mixture of fertilizing lime.

Now that Babylonia has again come under the control of enlightened and progressive peoples, we can confidently expect the near future either to prove or disprove all that has been written about this fertile soil.

It almost staggers one to think what the immediate future must have in store for a region containing nearly 20,000,000 acres of rich alluvial soil, compounded with 15 per cent of lime, capable of yielding two harvests per year, whose rivers furnish sufficient water for the necessary irrigation.

The fact that there is so much lime in the soil makes probable to me the statement of Herodotus, a statement which otherwise would seem unreasonable.

JOHN A. SCOTT

NORTHWESTERN UNIVERSITY

### CENAT ADULTERIA IN SUETONIUS

Suetonius *Aug. 70* cites a lampoon directed against a notorious dinner said to have been given by Augustus. One couplet reads as follows:

impia dum Phoebi Caesar mendacia ludit,  
dum nova divorum cenat adulteria.

The last line is thus rendered in the Westcott and Rankin edition: "While he feasts on novel debaucheries of the gods"; and the following remark appended, "a use of *cenare* possibly without parallel."

To me the words convey no such idea, though the ordinary construction of *cenare* with an accusative would admit this interpretation.

Professor Rolfe in his translation (Loeb Classical Library) renders: "and feasts amid novel debaucheries of the gods," which, if it does not convey the meaning of the Latin, has the merit of simplicity.

Shuckburg has the following note: "*cenat adulteria*: 'represents novel debaucheries in his banquet.' The accusative with *cenare* is common in poetry